

Fiber optic sensor for steel and heavy industries: HMD FD-A320 series

Wide coverage from 350°C to 1,300°C (*),
a new standard HMD in the industry.



(*). Iron. The temperature differs depending on metal.

Features

- Dual digital display for received infrared intensity and threshold level.
- Temperature mode selection (High/Low) achieves wide temperature coverage.
- Equipped with highly reliable hermetically sealed Bestact™ relay. (FD-A320H)
- Analog output proportional to receiving IR intensity enables better traceability or line monitoring. (4 - 20mA)
- Accepts AC100-240V allowing for universal use.
- Compatible with all FD300A/FD600A accessories.

Highly visible two-layered reflective display.



* Bestact relay is a registered trademark of Yasukawa Controls Co., Ltd.

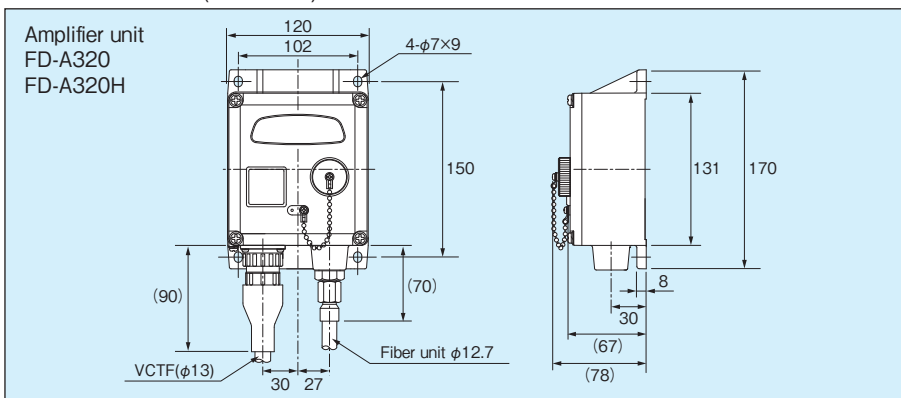
Specifications

Model		FD-A320		FD-A320H	
Type of output		Relay Output	PhotoMOS Relay Output	Bestact Relay Output	PhotoMOS Relay Output
Operation	Mode	ON-OFF control Light ON			
	Rating	Transfer contact 1c MAX 5A 250V AC (Resistive Load)	1a MAX 0.1A 250V AC/DC (Resistive Load)	1a 0.5A 220V AC 0.3A 110VDC (Inductive load)	1a MAX 0.1A 250V AC/DC (Resistive Load)
	Response time	Relay Output: 17ms or less	PhotoMOS Relay Output: 4ms or less	Bestact Relay Output: 6ms or less	PhotoMOS Relay Output: 4ms or less
Stability output	Operation Mode	After seven consecutive runs with less margin for the threshold light intensity			
	Rating	Relay Output: 1a MAX 5A 250V AC (Resistive Load) PhotoMOS Relay Output: 1a MAX 0.1A 250V AC/DC (Resistive Load)			
Current		Operation Mode: 4mA to 20mA analog signals (Allowable load resistance: 0 to 500Ω) Response time 4ms or less F.S			
Valid Lens Aperture		28mm DIA (OHA/OHAN/OHAN10)			
Power supply		AC100 to 240V +10% -15% 50/60Hz			
Power Consumption		6W or less			
Connection Method		Connector type leaded 2m wire (VCTF 0.75sq x 16c)			
Ambient temperature		Optical head /Optical Fiber Unit: -25 to +200°C Amplifier unit: -25 to +50°C (with no icing)			
Storage temperature		-40 to +70°C (with no condensation and no icing)			
Ambient humidity		35 to 85% RH (with no condensation)			
Bending limit of optical fiber unit		50mm radius			
Vibration resistance		10 - 55Hz Single amplitude 1.5mm 2hours each in X.Y.Z. directions			
Shock resistance		500 m/s ² (Approx.50G) Three times each in X.Y.Z. directions			
Protective Construction		IP64			
Weight		Amplifier Unit: Approx.1100g Attached cable: Approx.620g			

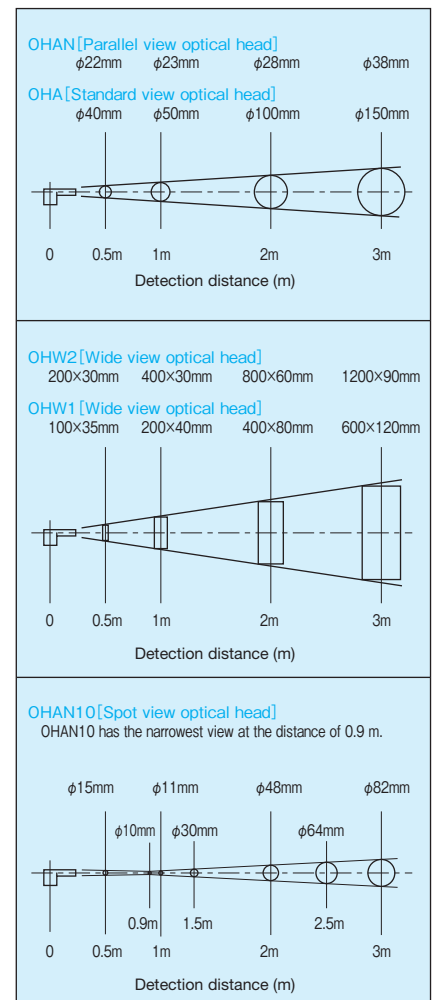
ENVIRONMENTAL CHARACTERISTICS

Sensing Cell	Ge Photodiode	
Sensitivity Wave Length	0.8 to 1.8μm	
Detection Temperature Range	Low Temp. Range (350~800°C) / High Temp. Range (490~1300°C) Switch with operation panel	
STB Function	Built-in	
Display	Figure display	Received light level : 3 digit display Red LED Threshold value : 2 digit display Green LED
	Operation display light	Output [O.P.L.] : Orange LED Stability [STB] : Green LED
		Simulation input [SIMU] : Orange LED Temperature range display High temperature range (Ht) : Orange LED Low temperature range (Lt) : Orange LED
Received light level display range	0.0 to 12.0 (0.1 step)	
Operation Light Level Set-up Range	1.0 to 9.0 (0.1 step)	
Simulation Input	ON : Short-circuit (Outflow current 5mA max) OFF : Open-circuit	

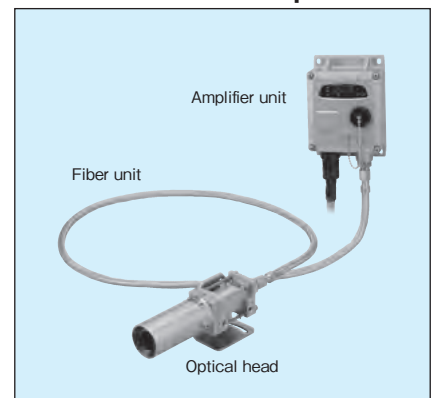
Dimensions (Unit : mm)



Detection field of view



The standard setup



- This sensor is designed to detect a specific object. It is not provided with control functions for prevention of injuries or accidents in itself.
- Takex will not held responsible for any damage or loss incurred due to accidents, faulty installation, abuse, misuse, improper maintenance or acts of God including lightning surge.
- Specifications and dimensions may be subject to change without notice.



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